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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,961	03/22/2004	Jong-Whan Cho	21C-0119	2751
23413 7590 04/01/2008 CANTOR COLBURN, LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER CHOWDHURY, AFROZA Y				
ART UNIT		PAPER NUMBER		
2629				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/805,961

**Applicant(s)**

CHO ET AL.

**Examiner**

AFROZA Y. CHOWDHURY

**Art Unit**

2629

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 5-9, 11, 12 and 17-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10 and 13-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment received on **March 7, 2008** has been entered. Claims 1-30 are currently pending. Applicant's request for continued examination is addressed below.

### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **"the photo detective module is exposed to an exterior to the body"** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 1, there is no support for "... **the photo detective module is exposed to an exterior to the body...**" in the specification. Specification does not described whether the photo detective module is outside the body.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1–3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colgan et al. (US Patent 6529189) in view of Mumford (US Patent 6377249).

As to claim 1, Colgan et al. discloses a stylus comprising: a body (fig. 2); a control module (fig. 2(26), microcontroller) that is configured to output a control signal in response to the sensing signal (col. 3, lines 25-35); and a light generating module (fig. 2(18), LED) that is configured to receive a driving power signal (fig. 3, col. 3, lines 40-45) in response to the control signal to generate a light (fig. 3, col. 3, lines 35-40).

Colgon et al. does not specifically teach outputting a control signal in response to the sensing signal when the level of the sensing signal is higher than a level of a reference signal.

However, it is obvious for the control module of Colgon et al. to output a control signal in response to the sensing signal when the level of the sensing signal is higher than a level of a reference signal.

Colgan et al. also does not teach photo detective module that is being disposed in the body of the stylus.

Mumford teaches a light pen comprising a photo detective module (col. 6, lines 30-46) that is configured to detect a light inputted from an external source to output a

sensing signal of which level is changed in accordance with an intensity of the light (col. 6, line 65 – col. 7, line 1) and the photo detective module (col. 6, lines 30-46) being disposed in the body (fig. 1).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to incorporate Mumford's idea of using a photo detector into the stylus of Colgan et al. to make a light pen where a detector detects a first light to output a sensing signal and a control module outputs a driving signal in response to the sensing signal to generate a second light in order to reduce cost and weight.

As to claim 2, making a light pen with a light generating module that includes a light emitting diode for generating a white light is a design choice.

As to claim 3, Mumford teaches a light pen wherein the photo detective module (col. 6, lines 30-46) includes a photo transistor or a photo diode.

7. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colgan et al. (US Patent 6529189) in view of Mumford (US Patent 6377249) and in further view of Traub (US Patent 3911270).

As to claims 4 and 10, Colgan et al. (as modified by Mumford) discloses a stylus that includes a tip (fig. 2, col. 3, lines 10-11) and a switch (fig. 1 and 2 (12,14), col. 3,

lines 25-34, buttons) applies an operation signal to the control module in response to the movement of the tip (fig. 2(16), col. 3, lines 10-11).

Colgan et al. (as modified by Mumford) does not teach any opening at the end of the body and a tip having a cylinder flange shape. Making a cylinder flange shape tip is a design choice.

Traub teaches a light pen wherein an end of the body includes an opening (fig. 1(16)) through which the light exits and the tip (fig. 1(14), col. 2, lines 25-31) comprises an elastic member (fig. 1(36), col. 2, lines 54-58).

Therefore, it would have been obvious to one skill in the art at the time of invention was made to combine Traub's light pen with the stylus of Colgan et al. (as modified by Mumford) to make a light pen to operate with a liquid crystal display device.

#### ***Allowable Subject Matter***

8. Claims 13 –16 are allowable.
9. The following is a statement of reasons for the indication of allowable subject matter:

None of the prior art references, alone or in combination, does not show “a **driving pulse generating module that is configured to generate a first driving power pulse having a first frequency during a first time period and a second driving power pulse having a second frequency during a second time period, the driving pulse generating module being disposed in the body; and a light generating module that is configured to generate a first light in response to the**

**first driving power pulse and a second light in response to the second driving power pulse, the first light flickering at a third frequency, and the second light flickering at a fourth frequency”** in combination with other limitations of claim 13.

### ***Response to Arguments***

10. Applicant's arguments filed **March 7, 2008** have been fully considered but they are not persuasive.

In 3<sup>rd</sup> paragraph of page 3 of Remarks, Applicants argue, “Mumford does not teach a light pen that ... receives “a first light” from the display device...in turn “generates a second light”...as claimed”. The examiner respectfully disagrees to this statement.

First, “a light pen that ... receives “a first light” from the display device” is not claimed. Second, Colgan et al. (as modified by Mumford) teaches a light pen that receives a first light from an external source and generates a second light (see above rejection of claim1).

In 4<sup>th</sup> paragraph of page 3 of Remarks, Applicants state, “...that the photo detective module 120 of the present invention is exposed to an exterior to the body 110...”. However, it is neither described in the specification nor shown in the figure that the photo detective module 120 of the present invention is exposed to an exterior to the body 110.



In 1<sup>st</sup> paragraph of page 4 of Remarks, Applicants argue that Colgan and Mumford cannot teach or suggest the organic combination of the photo detective module and the light generating module. The examiner respectfully disagrees to this assertion. Since both references are in the same art invention, these two references can be combined.

It is not necessary that the references actually suggest, expressly or in so many words, the changes or improvements that applicant has made. The test for combining references is what the references as a whole would have suggested to one of ordinary skill in the art. In re Sheckler, 168 USPQ 716 (CCPA 1971); In re McLaughlin 170 USPQ 209 (CCPA 1971); In re Young 159 USPQ 725 (CCPA 1968).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AFROZA Y. CHOWDHURY whose telephone number is (571)270-1543. The examiner can normally be reached on 7:30-5:00 EST, 5/4/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC

3/27/2008

/Bipin Shalwala/

Supervisory Patent Examiner, Art Unit 2629